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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,461	12/03/2004	Xavier Hugon	62819 (4590-353)	2868
33308	7590	07/26/2006	EXAMINER	
LOWE HAUPTMAN GILMAN & BERNER, LLP 1700 DIAGNOSTIC ROAD, SUITE 300 ALEXANDRIA, VA 22314			STEIN, JAMES D	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 07/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/516,461		HUGON ET AL.	
	Examiner		Art Unit	
	James D. Stein		2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is responsive to the amendment filed on 05/02/06, which has been entered and considered. Claims 1 and 2 have been amended; new claim 24 has been added; therefore, claims 1-24 are pending in the application.

Response to Arguments

Applicant's arguments filed 05/02/06 have been fully considered but they are not persuasive. Applicant has argued that the examiner is relying on a combination of two embodiments in support of the rejections of the claims. This is not the case, as fig. 5C of Randall independently discloses the claimed invention. Fig. 5C shows an optical filtering component comprising a tunable (at least abstract) wavelength selective filter 510/511 capable of transmitting a spectral band centered around wavelength (fig. 15) and reflecting light whose wavelength is outside said band (definition of a band pass filter); an input guide 551 conducting light radiation to the filter 510/511 wherein the input guide 551 conducts the radiation to the filter 510/511 in order to perform a first pass through it; and means 520 for returning a first part of the radiation reflected by the filter 510/511 during the first pass in order to perform a second pass through it (at least ¶0084); and a collimation means 505 common to the input guide 551, to the return means 520, and to the second output guide 552.

Moreover, even if, *arguendo*, Examiner was relying on multiple embodiments of Randall, it would have been obvious at the time of the invention to an ordinarily skilled artisan to combine certain features from said embodiments as a matter of obvious design choice, *as they are various embodiments of the same invention*. They are not incompatible, as stated by applicant. Therefore, the rejections set forth in the previous Action are maintained.

Claim Rejections - 35 USC § 103

Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over [USPUB 2002/0196549] to Randall et al. (“Randall”), which discloses a related optical filtering component.

With regard to claim 1, fig. 5C of Randall shows an optical filtering component comprising a tunable (at least abstract) wavelength selective filter 510/511 capable of transmitting a spectral band centered around wavelength (fig. 15) and reflecting light whose wavelength is outside said band (definition of a band pass filter); an input guide 551 conducting light radiation to the filter 510/511 wherein the input guide 551 conducts the radiation to the filter 510/511 in order to perform a first pass through it; and means 520 for returning a first part of the radiation reflected by the filter 510/511 during the first pass in order to perform a second pass through it (at least ¶0084); and a collimation means 505 common to the input guide 551, to the return means 520, and to the second output guide 552.

Therefore, the claimed invention is disclosed by Randall except for the spectral bands to be “narrow”. Fig. 15a suggests the wavelength bands passed by filter 510/511 and wavelengths reflected by the filter (outside bands) when the device is used to compensate for dispersion in MUX communication devices. These wavelength bands appear to be narrow. One of ordinary skill in the art would expect the wavelength bands passed by filter 510/511 to be as narrow as required by the specification of the input to the system; and conventional optical communication systems include information contained in optical signals within very narrow wavelength bands. Furthermore, multilayer interference filters, such as the filter 110 taught by Randall, are generally narrow band pass filters. For example “Understanding Fiber Optics,” by Jeff Hecht

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teaches that such filters transmit a *narrow* range of wavelengths (page 362). One of ordinary skill in the art would expect the pass bands of the filter 110 to be narrow. Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art to ensure the wavelength bands passed by the filter 510/511 of Randall were narrow bands in order to compensate for dispersion in modern optical communication systems, which have information contained in narrow wavelength bands.

With regard to claim 2, fig. 5C of Randall shows a second output guide 552 conducting a fourth part of the radiation reflected by filter 510 (110 in fig. 1).

With regard to claims 3, 11 and 12, in addition to the rejection of claims 1 and 2 previously discussed above, collimating lens 505 is shown to be arranged, with regard to the optical path of the device, on the one hand, the filter 510/511, and on the other hand, the input guide 551, the return means 520 and the second output guide 552 (fig. 5C).

With regard to claim 4, in addition to the rejection of claim 1 previously discussed above, collimating lens 505 is suggested to be a graded index lens, or GRIN lens (§0059).

With regard to claim 5, in addition to the rejection of claim 4 previously discussed above, fig. 5C shows the focal plane of lens 505 coinciding with an input face of the lens 505.

With regard to claims 6, 13 and 14, in addition to the rejection of claims 1, 2 and 3 previously discussed above, fig. 5C shows the return means 520 directing the first part of the radiation to the filter 510/511 with the same incidence as the input guide 551 (i.e. the return light path is the same as the incoming light path).

With regard to claims 7 and 15-17, in addition to the rejection of claim 1-4 previously discussed above, Randall suggests that the means for tuning the device comprises tilting the filter 510/511 (at least ¶0028).

With regard to claims 8 and 18-19, in addition to the rejection of claims 1-3 previously discussed above, optical filtering device 510/511 includes means for inserting radiation whose length is substantially centered on the given wavelength.

With regard to claims 9 and 21-22, in addition to the rejection of claims 1-3 previously discussed above, the limitations recited are directed to a *method of forming* the reflective element, while the claims are directed to an *apparatus*, and therefore cannot be given patentable weight. Such method limitations can only be given weight in a claim with a method style preamble. Moreover, Randall suggests that the reflective element 520 can be a MLIF reflector (¶0064), which are commonly formed from ion implantation (ion exchange) and glass plate photolithography, which are well-known methods of forming optical articles. It would have been obvious at the time of the invention to one of ordinary skill in the art to form the optical return means from either of said methods because they are conventional methods commonly used to form such articles.

With regard to claims 10 and 22-23, in addition to the rejection of claims 1-3 previously discussed above, the claimed invention has been disclosed and discussed above except for an amplifier. Amplifiers are well known in the art be used in situations where optical attenuation occurs. Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art to include and amplifier in the optical filtering device of Randall in order to amplify the optical signal to compensate for any attenuation caused by the filter 510/511.

With regard to claim 24, in addition to the rejection of claim 1 previously discussed above, fig. 5C of Randall shows the input guide 551 and output guide 552 to be distinct.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James D. Stein whose telephone number is (571) 272-2132. The examiner can normally be reached on M-F (8:00am-4:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

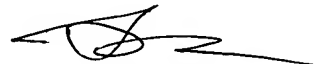
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



James D. Stein
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SUNG PAK
PRIMARY EXAMINER